

DIMMABLE BALLAST WITH RESISTIVE INPUT AND LOW ELECTROMAGNETIC INTERFERENCE

ABSTRACT

5 An AC to AC power conversion apparatus with constant power feeding characteristics
to fluorescent lamp or HID lamp is described. The constant power characteristic is achieved
by discontinuous mode operation of capacitor coupled in series with the load. Packets of
energy are pumped out to the load in each switching cycle, regardless of the resonant
characteristics. The dependence of the input power on the square of the supply voltage make
10 the input resistive and produces good power factor automatically. The lamp load is dimmable
by external phase control dimmer like resistive incandescent lamps. Multiple lamp loads with
different power rating can be integrated by adding more sets of said capacitors and associated
components.